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FISHERY MARKET NEWS

APRIL 1939

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U. S. DEPARTMENT OF COMMERCE
BUREAU OF FISHERIES
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FISHERY MARKET NEWS

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FISHERY MARKET NEWS

A REVIEW OF CONDITIONS AND TRENDS OF THE COMMERCIAL FISHERIES

April 1939 | Washington, D. C. | Vol. 1, No. 4

SUMMARY

Fresh Fish

New England.--February vessel landings only 1 percent less than those of a year ago; rosefish receipts more than doubling. Cod, haddock, and rosefish registered increases over the previous month. Vessel landings for January and February, 1939, declined 15 percent as compared with the same months in 1938, receipts of all major species decreasing except rosefish. Marine bait worm industry flourishes in Maine, Massachusetts, and New York.

Maine.--Small boat fishing for groundfish declining. Sardine pack for 1938 smallest in years. Soft clam catch in 1938 about same as 1937; lobster catch probably better. Shrimp being canned in two localities; prices lower.

Florida.--Mullet scarcer than usual early in March and catch of Spanish mackerel erratic.

Great Lakes.--Commercial fisheries of Lake States decreased slightly in volume and value in 1937. Lake trout was the most valuable fish. Michigan led in the production of fishery products. Lake Erie was the most productive of the lakes. In February Chicago's receipts of fish 31 percent under preceding month.

Pacific Coast.--Halibut season opens April 1. Trawler catch in California over 11 million pounds in 1938.

Japan.--Observation planes used to locate fish schools.

Frozen Fish

Domestic stocks decrease one-third as compared with previous month. Diminished holdings occurred in all sections of country and for most important species except whitefish. Greatest decrease in New England where holdings dropped almost one-half in March to a volume one-third less than a year ago. New York stocks considerably below the previous month as well as the 1938 level. Chicago holdings show little change from previous month.

Volume of fishery products frozen in 1938 greatest in history. New England led in both quantities frozen and average monthly holdings. Haddock fillets, salmon, whiting, rosefish fillets, halibut, and pollock fillets frozen in greatest quantities.

Canned Fish

At end of February only 23 percent of North American salmon pack still unsold in canners' hands. Brisk demand reported for remaining pink salmon. California tuna pack for January and February 1939 increased 37 percent over last year. Yellowfin made up 80 percent of pack. California sardine pack for 1938-39 season slightly ahead of previous season at end of February. Mackerel pack for first two months of 1939 in California less than year ago. Japanese canned sardine exports 39 percent less than 1937 record. Chosen sardine production in 1938 materially less than 1937. Portuguese sardine production in 1938 well under 1937 despite similar catches.

Byproducts

Use of kelp products expanding. More than half of domestic factory consumption of fish oils and nine-tenths of whale oil used in soap manufacture.

Foreign Trade

Imports of edible fishery products for January and February this year increased over 1938, due to larger volume of salted groundfish, canned tuna, and canned crab meat.

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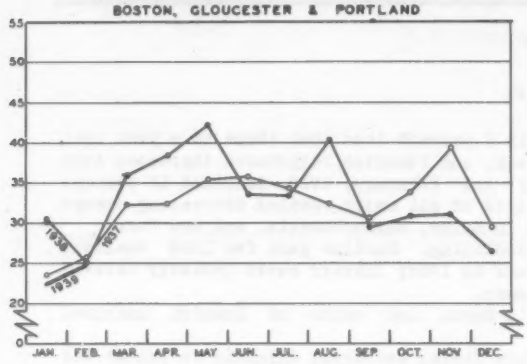
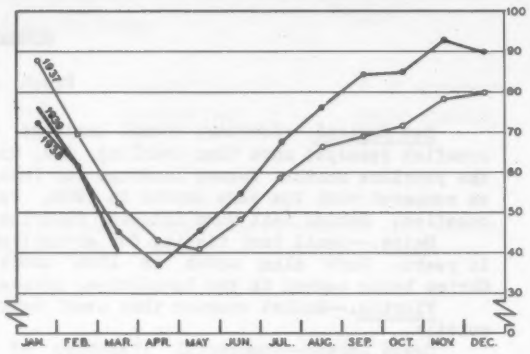
TRENDS OF FISHERY TRADE

In millions of pounds

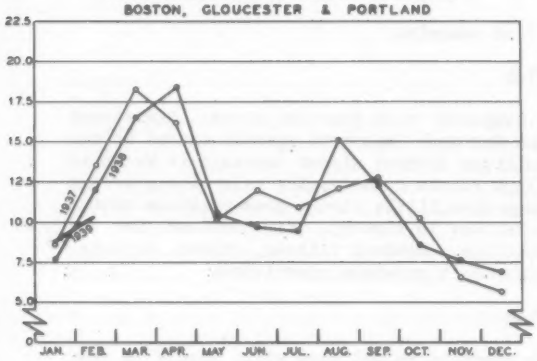
VESSEL LANDINGS, ALL FRESH FISH
BOSTON, GLOUCESTER & PORTLAND



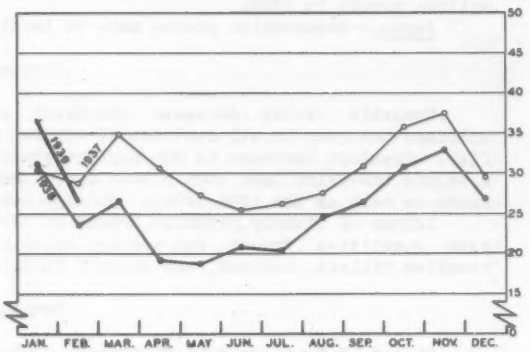
DOMESTIC COLD-STORAGE HOLDINGS OF FROZEN FISH



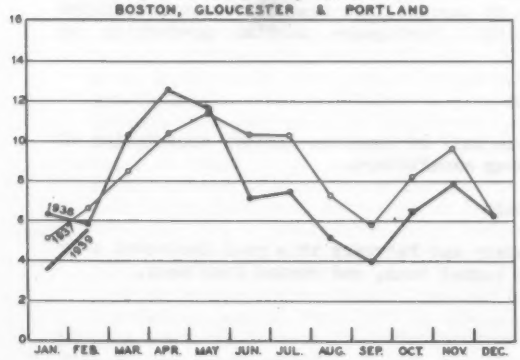
VESSEL LANDINGS, FRESH HADDOCK
BOSTON, GLOUCESTER & PORTLAND



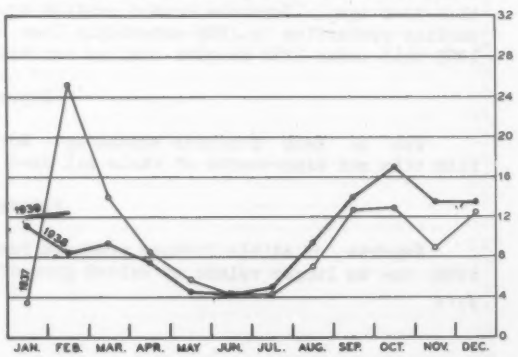
IMPORTS OF EDIBLE FISHERY COMMODITIES



VESSEL LANDINGS, FRESH COD
BOSTON, GLOUCESTER & PORTLAND



EXPORTS OF EDIBLE FISHERY COMMODITIES



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WHALING

By Ralph A. Ferrandini, Special Whaling Agent
Law Enforcement Division

U. S. Bureau of Fisheries

The history of whaling presents one of the most romantic chapters in the annals of seafaring life. Since its inception in the Bay of Biscay early in the twelfth century, whaling has been carried on at one time or another in all the oceans of the world.

At the beginning of the eighteenth century the New England colonists became prominent in the industry and by 1846 there were 735 American vessels engaged in the fishery.

The American fishery continued to expand and flourish until the discovery of petroleum in the United States about 1850. Due to lower production costs, the distillation products of petroleum quickly replaced whale oil for illumination purposes. In 1871 practically the entire Arctic fleet was destroyed by ice. This catastrophe followed by the substitution of steel for whalebone marked the end of American supremacy.

The relentless, unrestricted pursuit of these huge marine mammals led inevitably to the virtual extermination of certain species in first one sea and then another. In 1887 new impetus was given the stricken industry by the invention of the harpoon gun by a Norwegian sailor, Svend Foyne. The harpoon gun shooting a heavy harpoon with an exploding bomb and mounted on the bow of fast boats of 100 to 150 tons made it possible to capture the large fin, blue, sei, and humpback whales which previously had been too speedy and dangerous to hunt. A few years later a violent controversy, which culminated in a successful protest by the Norwegian Codfishery, closed the Norwegian waters to whaling (Norwegian Fisheries Act of January 7, 1904). This led to the exploitation of distant fields, the establishment of new shore stations, and ultimately to the introduction of the huge modern factory ship. With the advent of the factory ship, the Antarctic, hitherto unexplored, was invaded.

Shortly after the beginning of the 20th century oil chemists learned the manner of converting whale oil into hardened fat. Later the World War created a demand for glycerine and once more whale oil returned as an important product of commerce.

By 1930 Antarctic whaling had developed to such amazing proportions that for the first time leaders in the industry were forced to heed the warnings of eminent biologists and conservationists who had long followed with misgivings this unremitting warfare against these helpless creatures. In 1931 the League of Nations provided for a committee of experts to consider the question. This committee adopted a Convention for the Regulation of Whaling. The Convention was signed by 26 nations, including the United States. In the United States, the Whaling Treaty Act of May 1, 1936, and the Joint Regulations of the Secretary of the Treasury and the Secretary of Commerce, of October 9, 1936, promulgated thereunder gave effect to this Convention.

An International Whaling Conference held in London, England, on June 8, 1937, drafted an Agreement to supplement and extend the International Convention for the Regulation of Whaling. This Agreement was ratified by the United States and the new Joint Regulations of the Secretary of the Treasury and the Secretary of Commerce were signed by the President, December 20, 1938.

The original Convention, among other things, prohibited the killing of right and gray whales; set definite length limits on various other species; and required the licensing of all shore stations, factory ships, and killer boats, and the collection of statistical and biological data on all whales killed. This information was deemed essential to all considerations for future modifications or changes in the regulations.

The Agreement drafted June 8, 1937, supplementing the original Convention raises the minimum length on blue whales to 70 feet, finback whales to 55 feet, and protects sperm whales under 35 feet. Pelagic whaling, so far as baleen whales are concerned, is absolutely prohibited in certain areas, and the Agreement further provides for a closed period on the breeding grounds.

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In general, it may be stated that there are virtually two groups of whales; all have their young in the tropical waters; then, accompanied by their calves, one group migrates to the Antarctic and the other to the Arctic. The northern group leaves the tropical waters of the Caribbean Sea and Lower California in the spring or early summer, travel to the Arctic Seas, and return along the same general route in the fall. Thus, whaling in northern waters usually starts in May or June and ends in October.

The seasons are reversed in the Southern Hemisphere; therefore, the southern group leaves the tropical waters off the coasts of Africa, South America, and Australia in the Antarctic spring, i.e., October, migrates to the Antarctic polar seas during the Antarctic summer, and returns to tropical waters in autumn (March and April). Whaling in the Antarctic is restricted to a definite season. The season opens December 8 and closes March 7. During 1937-38 the season was extended to March 15.

The American whaling industries operating under these new regulations for the first time in 1937-38 were represented by two shore stations and six killer boats in the Alaska and Bering Sea area, one factory ship and nine killer boats in the Antarctic, two factory ships with fifteen killer boats in the Indian Ocean off the coast of West Australia, and one factory ship with two killer boats off the coast of California. A total of 5,198 whales was captured, chiefly humpbacks and finbacks, producing 253,166.4 barrels of oil. In addition, the Alaska area produced 435 tons of bone meal and 770 tons of meat meal. The California area produced 10-1/5 tons of bone meal as well as 488,500 pounds of fresh whale meat and 136,400 pounds of frozen whale meat.

The value of the catch is conservatively estimated at $6,500,000 and fees for whaling licenses yielded $10,250 to the Federal Government.

A coast guard inspector was assigned to each shore station and factory ship. Uniform methods for the collection of statistical and biological data were inaugurated by the Bureau of Fisheries. Samples of stomach contents were taken when practicable and a comprehensive report containing the results of the stomach contents' analyses as well as detailed information concerning all American whaling operations was prepared by the Bureau and forwarded through the State Department to the International Bureau for Whaling Statistics, Oslo, Norway.

Glancing briefly at the world whaling situation, we find that, despite recent progress in international regulation, whaling as a profitable enterprise has at best but a dubious future.

The annual catch of whales has jumped from 11,000 in 1919-20 to 43,000 in 1930-31 and exceeded 51,000 in 1937-38. The Antarctic is the last remaining area where whales are plentiful. Eighty-five percent of the annual catch comes from the Antarctic. The west coasts of Africa and Australia account for about 4 percent each, the coasts of Peru and Chile about 2 percent each, while California, British Columbia, Alaska, Kamchatka, Japan, and Korea are other rather insignificant areas.

Japan entering the Antarctic field in 1934 with one factory ship and five killer boats has increased her operations enormously and now has six huge factory ships with nearly 50 killer boats. The fact that Japan has not yet become a party to the Whaling Treaty gives further cause for apprehension.

The 1938-39 Antarctic whaling season closed March 7, 1939. Figures on the total catch are not yet available; however, the Norwegian Whaling Gazette, January 1939, stated that despite increased operations, "The reports which have been received show that the catch this year has failed enormously compared with the catch in the season 1937-38." Should this prove to be correct, it may well mean that the decline which history of whaling shows inevitably follows unrestricted exploitation is already at hand and the last stronghold of these harmless mammals has been successfully conquered by the marvelous ingenuity of man.

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FEDERAL FISHERIES BUREAU UNDERTAKES RETAIL MARKETING SURVEY

A study of the retail marketing of fresh and frozen fishery commodities in some 50 representative cities east of the Mississippi River was started late in March by the Bureau of Fisheries.

The annual domestic per capita consumption of fish amounts to only 13 pounds and is less than that of most of the important countries of the world. This low consumption not only curbs the potential growth of our commercial fisheries but also is evidence of the restricted volume of these healthful foods in the average diet. Recent studies indicate wide variations in the consumption of fish among various cities as well as among the various social and economic groups of residents of these cities.

It is the purpose of this survey to study the conditions under which fish are sold at retail. To accomplish this, the Bureau's investigators will interview a large number of dealers representing all segments of the retail trade, to obtain information on retail methods, equipment used, prevalence and nature of advertising, consumer preference and response, location of retail outlets, and characteristic as well as unusual merchandising practices and selling methods.

The results of the survey will be analyzed to determine the factors which lead to the most favorable response from the public and to establish criteria that may guide retailers toward those practices which are most successful or promising.

FISHERIES OF MAINE IN 1938

Groundfish.--Small boat fishing for groundfish has been declining for several years. Small boats were successful for a few years in dragging near shore for haddock, hake, and flounders, but catches of this type during 1938 were small. Many fishermen formerly operating small boats are either abandoning them to work on larger vessels fishing farther off shore or are leaving the fishing business.

Herring.--The sardine pack in Maine during 1938 was the smallest in many years. This is reported not to be the result of a shortage of herring but the result of weather and other conditions which restricted their appearance near shore. Late in the season some seiners near Monhegan made a few good catches which received the highest prices paid in several years. In March 1939 catches are being reported on the Canadian side of Passamaquoddy Bay where sardines are canned throughout the year.

Clams.--The clam industry of Maine is based mostly on the soft clam which yields approximately 15 pounds of meat to the bushel. It is reported that the catch in 1938 was about the same as in 1937. However, the catch in each of the past two years greatly exceeded that in 1935 when the first preceding survey was made. A few hard clams are taken from Casco Bay.

Lobsters.--While final figures are not available, the catch of lobsters during 1938 probably exceeded that of the preceding several years, and it would have been larger if the fishermen had not been hampered by lack of bait during the most productive season. Prices were approximately 20 percent lower in 1938 than in the preceding year. Early in March 1939, 40 cents per pound was being offered for lobsters but only a small number of boats were fishing because of inclement weather.

Shrimp.--There was some activity in the shrimp fishery of the Gulf of Maine in the spring of 1938. Prices were high and the shrimp were marketed fresh. This spring, however, the shrimp are being canned at Friendship and Medomak, and prices are considerably lower.

NEW ENGLAND VESSEL LANDINGS SHOW DECLINE

Landings of fishery products at the ports of Boston and Gloucester, Mass., and Portland, Maine, by fishing vessels during February 1939 totaled 24,802,000 pounds, valued at

$705,000 to the fishermen. This is a decrease of 1 percent in quantity and 3 percent in value as compared with the landings during the same month last year. The principal items landed during the month were haddock, 10,248,000 pounds; cod, 5,563,000 pounds; and rosefish, 5,269,000 pounds. Landings at Boston accounted for 90 percent of the fish landed at the three ports, those at Gloucester 7 percent, and those at Portland 3 percent.

During the two months ending with February 1939 landings at the three ports amounted to 46,990,000 pounds, valued at $1,376,000 as compared with 55,189,000 pounds, valued at $1,533,000 during the same period last year. This is a decline of 15 percent in the quantity and 10 percent in the value of the landings. Receipts of all major items except rosefish decreased during this period.

BOSTON MARKET NEWS OFFICE ISSUES FIRST MONTHLY REPORT

The importance of the fish business of Boston during the early part of the week is shown by the fact that average daily landings of fish at the Boston Fish Pier on Mondays, Tuesdays, and Wednesdays during January exceeded 1,000,000 pounds. On Thursdays, the average dropped to less than 600,000 pounds; Fridays, about 350,000 pounds; and Saturdays, only 28,000 pounds. The above data, as well as summarized information on the daily receipts by species, the range of first sale prices, the daily weighted average prices, and comparative information for previous months are included in the first monthly summary which has just been released by the Bureau's fishery market news office at Boston. Persons wishing to receive these summaries monthly should make request to the Bureau of Fisheries, 253½ Northern Avenue, Boston, Mass. There is no charge for this service.

THE MARINE BAIT WORM INDUSTRY

The bait worm industry which flourishes along the coasts of Maine, Massachusetts, and New York is a unique marine enterprise. The production of both bloodworms and sandworms to be used as fish bait has steadily increased until the total annual value of the industry, as determined by the Bureau's last survey in these three States, is approximately $150,000.

Cumberland and Lincoln Counties support the Maine industry, while Essex, Suffolk, and Norfolk Counties yield 75 percent of the Massachusetts production. The fishery in New York is confined to Nassau and Suffolk Counties.

The worms are obtained on the tide flats by the use of a fork or hoe similar to the method practiced in clam digging. In preparation for shipment to the markets, the bloodworms are carefully packed in "sea lettuce" and placed in wooden baskets each containing 150 worms. Two baskets are fastened together, one upside down over the other, constituting a bundle comprised of 300 worms by actual count. Sandworms, which are more delicate, survive handling better when shipped in packages of two hundred each. Packed in this manner by local dealers, the bundles then move by rail each night from the points of production to the large markets such as New York. Only a small percentage is purchased by local sports fishermen.

The digger receives from 70 cents to $1.00 per hundred worms, depending upon the proximity of the market and current demand. A good digger will average 300 worms per day.

RECIPES FOR COOKING SHAD

The Bureau of Fisheries has prepared a mimeographed memorandum which includes several tested recipes for preparing shad for the table. These recipes include shad saute; broiled shad; baked shad; fillets of shad, baked, with minced bacon; planked shad with roe stuffing; shad roe stuffing; shad roe with scrambled eggs; shad roe scrapple; shad roe in cream; and shad roe, Spencer method, with bacon. Copies of the memorandum may be obtained without charge by requesting Fisheries Special Memorandum 3220-D, entitled "Recipes for

Cooking Shad". Requests should be addressed to the Publications Unit, Bureau of Fisheries, Washington, D. C.

FISHERIES OF FLORIDA IN MARCH

Agents in Florida report that while there is ordinarily a scarcity of mullet early in March, this scarcity seems to be more evident than usual this year. The catch of Spanish mackerel was recorded as somewhat erratic, large catches being recorded on some days and on others, none. Supplies of pompano have been very limited but the price early in March was good, averaging about 30 cents per pound to the fishermen.

CATCH OF LAKES' FISH DECLINES

The yield of the commercial fisheries of the Lake States, including the international lakes of northern Minnesota, during 1937 amounted to 83,958,000 pounds, valued at $6,033,000. This is a decrease of 11 percent in volume and 6 percent in value as compared with the catch in the previous year.

Based on value to the fishermen, lake trout, with a production of 9,428,000 pounds, valued at $1,521,000, was the most important species taken. Following in order were chubs, 6,044,000 pounds, valued at $903,000; whitefish, 3,366,000 pounds, valued at $681,000; blue pike, 11,021,000 pounds, valued at $646,000; lake herring, 21,557,000 pounds, valued at $621,000; yellow pike, 5,458,000 pounds, valued at $550,000; and yellow perch, 5,067,000 pounds, valued at $433,000.

Michigan led the Lake States in the production of fishery products with a catch of 28,984,000 pounds, followed by Ohio with 21,087,000 pounds, and Wisconsin with a total production of 18,036,000 pounds. The catch by fishermen from these States accounted for 81 percent of the quantity of the products taken in the Great Lakes and in the international lakes of northern Minnesota. The remaining 19 percent of the catch was taken by fishermen from the States of New York, Pennsylvania, Indiana, Illinois, and Minnesota.

Lake Erie was the most productive of the lakes in 1937, yielding a total catch of 26,933,000 pounds. Lake Michigan was second in importance with 26,398,000 pounds, followed by Lake Superior with 16,011,000 pounds; Lake Huron, 11,895,000 pounds; and Lake Ontario, 618,000 pounds. The catch in the international lakes of northern Minnesota, comprising Lake of the Woods, Rainy Lake, and Namakan Lake, amounted to 2,103,000 pounds.

During 1937 the fisheries of the Lake States gave employment to 9,331 persons. These consisted of 6,418 fishermen, 2,878 persons in wholesale and manufacturing establishments, and 35 persons on transporting craft. Salaries and wages paid in wholesale and manufacturing establishments amounted to $2,595,000 and manufactured products (canned, cured, packaged, and byproducts) produced in these plants were valued at $3,196,000.

FROZEN HALIBUT LEADS IN CHICAGO RECEIPTS

The principal species of fish, in poundage, received in the Chicago wholesale fish market during February was frozen halibut. Receipts of this species for this month totaled 394,000 pounds, which was an increase of 21,000 pounds in comparison with receipts for January. The bulk of the frozen halibut was imported from British Columbia, which exported via rail freight to Chicago 252,000 pounds. Following frozen halibut in receipts were sauger and shucked oysters with 379,000 pounds and 200,000 pounds, respectively. The principal source of the sauger shipments was Manitoba while the shucked oysters originated chiefly in Maryland. In addition to frozen halibut, sauger, and shucked oysters, 73 other varieties of seafoods were received at the Chicago market during February.

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CHICAGO SEAFOODS FROM MANY SOURCES

Twenty-four States, Alaska, and 7 Provinces of Canada furnished Chicago with seafoods during February. The leading States were Wisconsin with 329,000 pounds, the greater part of which was smelt and lake trout; and Massachusetts with 262,000 pounds, consisting largely of frozen rosefish and pollock fillets. The leading Province in exporting fish to Chicago was Manitoba which supplied fishery products amounting to 683,000 pounds, consisting largely of sauger. Total February Chicago receipts amounted to 2,554,000 pounds. In comparison with receipts for the previous month, this represented a decrease of 1,159,000 pounds, or approximately 31 percent.

These seafoods were transported to Chicago by express, motor-trucks, and rail freight. Sixty-two percent of all receipts were transported by rail freight; motor-trucks, 23 percent; and express, 15 percent.

HALIBUT SEASON OPENS APRIL 1

By the middle of April or shortly thereafter fresh Pacific Coast halibut will have made its appearance in the fish markets throughout the country. On April 1 the closed season prohibiting the landing of Pacific halibut, which has been in effect since October 29, ends and United States and Canadian fishermen will begin taking the first of 48,000,000 pounds of halibut they will be allowed to land during the year. According to the regulations of the International Fisheries Commission, none of this catch may be made after November 30.

Based on the percentage of the catch made by fishermen from the United States and Canada in 1938, it is anticipated that fishermen from the Pacific Coast States and Alaska will capture about 36,000,000 pounds of the quota. These fish will be landed principally at Seattle and Alaskan ports, and at Prince Rupert, British Columbia, where our fishermen are allowed to land the fish, in bond, for transshipment to the United States. Canadian fishermen will take the remaining 12,000,000 pounds of halibut, which will be landed principally at Prince Rupert and Vancouver, British Columbia. A considerable portion of the Canadian catch will be imported into this country. In recent years these imports have averaged about 5,000,000 pounds annually. This additional source of halibut, together with the Atlantic catch taken by domestic fishermen, which averages about 2,500,000 pounds each year, will supply our market with approximately 43,500,000 pounds of halibut during the coming year.

SALMON MARKETING REPORT ISSUED BY OREGON STATE COLLEGE

A report entitled "The Salmon Canning Industry", by Daniel B. Deloach, Ph.D., has recently been released by the Oregon State College, Corvallis, Oregon. This report which deals with the marketing phases of the salmon industry includes sections on such subjects as the following: "The Salmon Industry before 1864", "The Salmon Industry after 1864", "Classification of Species", "Standardization and Grading", "Enforcement of Standards", "Factors Affecting Supply", "Production--Canning", "The Market for the Product", "Marketing the Canned Product", "Sales Promotion", and "Pricing". The report is available from the Oregon State College at the price of 50 cents.

TRAWLER CATCH IN CALIFORNIA

A report entitled "Trawler Catch by Species and Fishing Areas", by G. H. Clark, supervising fisheries researcher, was released during March by the Division of Fish and Game of the State of California.

The report shows that the annual trawler catch in California during the 5-year period ended in 1938 has ranged between 10,700,000 pounds and 12,200,000 pounds, the smallest catch being recorded in 1936 and the peak in 1935. The catch in 1938 amounted to 11,400,000 pounds. The species taken by this gear consist largely of sole, sharks, dabs, flounders, rockfish, and skates.

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It is pointed out in the report that during 1938 all trawlers spent a total of 1,965 days in fishing and the average catch per boat per day aggregated 5,802 pounds; that a total of 5,935 drags were made and the average catch per drag amounted to 1,921 pounds; and that a total of 12,594 hours was spent by all boats in dragging and the average catch per boat per hour amounted to 905 pounds.

The report includes detailed statistics of the catch in each of the more than 80 areas of California where trawler fishing is prosecuted.

USE OF SEAWEED PRODUCTS EXPANDING

The seaweed industries of the United States provide raw material for the manufacture of many products used in the food, chemical, and drug industries. One of these products is sodium alginate which is manufactured from the giant kelp of the Pacific Coast, Macrocystis pyrifera. In recent years, sodium alginate has found a rapidly increasing use as a stabilizer in chocolate milk, ice cream, and other dairy and food products.

Because of the increasing demand for this product by the food industries, a leading manufacturer of sodium alginate and other seaweed products asked this Bureau to undertake a study of its composition and possible nutritive value. Accordingly, a cooperative research program has been worked out in detail whereby the industry will employ and assign to the supervision of the Bureau's technological staff two chemists as research associates for chemical and biochemical studies in the Bureau's technological laboratory in Washington, D. C. This work was begun during the latter part of March and is expected to require six months for completion.

MARINE-ANIMAL OILS USED EXTENSIVELY IN SOAP MANUFACTURE

More than half of the domestic factory consumption of fish oils is used in the manufacture of soap, and nine-tenths of whale oil is used for the same purpose, according to a statement released during March by the Bureau of the Census. Other commodities which use considerable quantities of marine-animal oils in their manufacture are printing inks, shortening, paint and varnish, and linoleum and oil cloth. There follows a detailed tabular statement of the factory consumption of marine-animal oils from 1936 to 1938 inclusive:

Factory Consumption of Marine-animal Oils
by Classes of Products, 1936-1938
(Shown in thousands of pounds)

Product	1936		1937		1938	
	Whale Oil	Fish Oil	Whale Oil	Fish Oil	Whale Oil	Fish Oil
Shortening	--	40,278	66	21,284	48	16,529
Soap	32,603	128,044	65,130	123,879	66,080	79,874
Paint and varnish	17	23,166	11	27,277	28	15,679
Linoleum and oil cloth	--	16,235	--	16,765	--	13,848
Printing inks	11	235	7	298	5	254
Miscellaneous	2,747	36,914	4,967	37,966	4,467	26,235
Loss, including foots	10	3,160	15	1,608	36	987
Total	35,388	248,032	70,196	229,077	70,664	153,406

JAPAN USES OBSERVATION PLANES TO LOCATE FISH SCHOOLS

The use of observation planes to locate schools of fish has developed into a successful routine business in Japan, according to information furnished the Bureau of Foreign and Domestic Commerce by the Office of the American Attache at Tokyo.

The Koku Nenkan (Aviation Yearbook) for 1938 published the 1937 operation statistics for the Tokyo Aviation Company which is operating off the Izu Peninsula. This yearbook

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records 43 flights made during 1937, totaling 150 hours in the air. The number of planes used for observation purposes is not given, but the crew consisted of pilot, radio operator, and "fish searcher". About 738 fishing vessels are said to have received information from 543 reports submitted. A total of 387 schools were located by this method, which resulted in catches aggregating 150,325 fish, valued at about $21,887.

Fisheries companies operating from Hokkaido and Chishima also are utilizing planes for observation purposes, and reports indicate that aircraft are being employed for this purpose off the coast of Chosen; however, no definite data have been obtained on these groups.

FROZEN FISH TRADE

Domestic Frozen Fish Stocks Decrease in March

Stocks of frozen fishery products declined nearly 22,000,000 pounds during the month ending March 15, 1939, continuing the rapid reduction in holdings which began during mid-winter. Holdings of frozen fish and shellfish on March 15 amounted to 40,403,000 pounds as compared with 62,253,000 pounds on the same date the previous month and 45,694,000 pounds on March 15, 1938. During the fall months of 1938 stocks of frozen fish and shellfish were unusually large and on November 15 holdings were approximately 15,000,000 pounds greater than in the same month the previous year. On December 15 holdings were 11,000,000 pounds larger than those of the previous year, while by January 15 they were but 4,000,000 pounds greater than those on January 15, 1938. On February 15 they were almost identical with those of the previous year, while on March 15 frozen fishery stocks were 5,000,000 pounds less than those on the same date in 1938.

The decrease in current stocks is accounted for principally by reduced holdings of cod, haddock, pollock and rosefish fillets, halibut, sablefish, and swordfish. It was noted that with the exception of halibut and sablefish all of the items are normally held in greatest quantity in the New England States. Holdings in these States on March 15 totaled 8,341,000 pounds, a reduction of 5,000,000 pounds as compared with the same month last year. Decreased holdings were also reported in the Middle Atlantic and Pacific Coast States and in the section comprising the States of Minnesota, Iowa, Missouri, North Dakota, South Dakota, Nebraska, and Kansas. Holdings in each of the other sections were greater than those of a year ago. In the section including the Gulf States holdings were considerably greater, increasing from 578,000 pounds on March 15, 1938, to 1,287,000 pounds in March of this year. The additional holdings in this section resulted principally from increased stocks of shrimp.

Holdings of frozen fish (exclusive of shellfish) totaled 34,471,000 pounds on March 15, or nearly 6,000,000 pounds less than on the same date last year; while holdings of frozen shellfish amounted to 5,931,000 pounds, an increase of 600,000 pounds as compared with those on March 15, 1938. The additional holdings of shellfish are accounted for by increased stocks of shrimp which are being held in considerable quantities in all sections of the United States. The holdings of this commodity amounted to 4,108,000 pounds on March 15, which was 69 percent of the total shellfish holdings. Other important items the holdings of which on March 15 were greater than a year ago were mackerel, blue and sauger pike, whitefish, and whiting.

A total of 4,460,000 pounds of fishery products were frozen during the month ended March 15, 1938, as compared with 5,219,000 pounds on the same date last year. The principal items frozen during the month were cod, haddock and rosefish fillets, and shrimp.

Large Withdrawals from Boston Freezers during March

Boston freezer holdings of frozen fish and shellfish declined sharply during March. On March 29, according to figures compiled by the Bureau of Fisheries, the stocks of cold-storage warehouses located at that city decreased 49 percent in comparison with holdings for the previous month. With few exceptions, the stocks of all frozen species stored declined. Particularly, heavy withdrawals of pollock fillets, medium and large mackerel, and

rosefish fillets were noted. The total poundage of all fish and shellfish remaining in the Boston freezers on the last Wednesday in March was 4,581,000 pounds consisting of 35 varieties. Frozen whiting, although participating in the general decline, was the largest individual item stored, with 780,000 pounds. Next, in volume, were pollock and rosefish fillets. During the month one species substantially increased in holdings, swordfish (Japanese), the holdings of which increased 42 percent to 385,000 pounds.

New York Cold-storage Holdings of Fish Below 1938 Level

On the last Thursday in March, New York City cold-storage warehouses reported 39 varieties of frozen salt-water fish, 14 fresh-water fish, and 8 shellfish and miscellaneous fishery commodities in storage. The principal items stored, in poundage, were sturgeon, shrimp, and whitefish. These fishery holdings totaled 5,077,000 pounds. Heavy withdrawals of shrimp, mackerel, ciscoes, and smelt during the month caused a sharp reduction of 31 percent in holdings for this period. New York holdings of the current year are considerably below the holdings of a year ago, the warehouses having in storage on March 31, 1938, fishery commodities weighing 6,612,000 pounds. The reduction in yearly holdings is largely attributable to lesser quantities of scallops, bluefish, spiny lobster tails, and squid being stored. However, while the holdings as a whole declined, individual species increased during the year, notably shrimp, sturgeon, and ciscoes.

Chicago Cold-storage Holdings Steady

Stocks of frozen fish and shellfish in Chicago cold-storage warehouses showed little change during the month ending Thursday, March 30. According to figures compiled by the Bureau of Fisheries on this date, the Chicago fishery freezer holdings totaled 4,936,000 pounds consisting of 51 varieties of seafoods. In comparison with the holdings on the last Thursday in February, this is a decline of 344,000 pounds or 7 percent. This slight decline of freezer stocks is accounted for largely by reduced quantities of shrimp, lake herring, and chubs being stored. In volume, the principal fishery commodities stored in the Chicago warehouses on March 29 were blue pike and sauger, the holdings of which increased 869,000 pounds or 199 percent. Of the more important species in cold storage, the holdings of yellow pike, silver salmon, and tullibees increased during the month.

Frozen Fish Trade in 1938

In 1938 freezing plants in the United States and Alaska froze 186,096,000 pounds of fishery products. This is the largest production in history, exceeding the amount frozen during the previous year by 11 percent and the average for the five years prior to 1938 by 24 percent. The value of these products at the time they were held in cold-storage plants was estimated at about $12,500,000.

Heavy freezing operations began in May, a month earlier than in 1937, and continued heavy into December; the quantities frozen exceeded 15,000,000 pounds during each month of this period. The largest production during a single month occurred during November when 22,536,000 pounds were frozen. Six items accounted for 53 percent of the fishery products frozen during 1938. They were haddock fillets, 11 percent; salmon, 10 percent; whiting and rosefish, each 9 percent; halibut, 8 percent; and pollock fillets, 6 percent.

The New England section led in the quantity of fish and shellfish frozen, with 87,097,000 pounds. Following in order were the Pacific section with 46,519,000 pounds, and the Middle Atlantic section with 22,952,000 pounds. The total of all other areas combined was 29,528,000 pounds.

During 1938 the average monthly holdings of frozen fish and shellfish in all sections amounted to 67,994,000 pounds as compared with a monthly average of 63,810,000 pounds in 1937 and an average of 53,176,000 pounds during the five years prior to 1938. The smallest supplies were in storage during April when 37,367,000 pounds were held. Following this

month holdings rose steadily and reached a maximum of 93,024,000 pounds in November. The average monthly cold-storage holdings were greatest in the New England section in 1938, amounting to 22,678,000 pounds. Following in order were the Pacific region with an average of 17,021,000 pounds, and the Middle Atlantic section with 11,770,000 pounds.

CANNED FISH TRADE

Unsold Canned Salmon Stocks Continue to Decrease

At the end of February 1939 there were but 2,033,000 cases of unsold canned salmon in the hands of packers, according to information released by the Association of Pacific Fisheries. This represents 23 percent of the 1938 North American pack of 8,988,000 cases. Of the 3,634,000 cases of pink salmon packed in 1938, there were reported but 573,784 cases on hand March 1, 1939, or 16 percent of the pack. A brisk demand is now reported for pink salmon at $1.05 per dozen, with the packers reluctant to sell. However, a large percentage of the pink pack was sold during the fall and winter months at 95 cents to $1.00 per dozen. A year ago pinks sold from $1.15 to $1.20 per dozen. Red or sockeye salmon have sold this year at $1.75 to $1.95 per dozen of halves as compared with an average of $2.35 per dozen for the 1937 pack.

California Tuna Pack Increases in 1939

The pack of tuna and tunalike fishes in California during the first two months of 1939 increased about 37 percent over the pack for the same period last year, based on a preliminary statement issued by the State of California's Division of Fish and Game. The pack thus far this year amounted to nearly 198,000 cases (48 half-pound cans to the case), as compared with 145,000 cases during the first two months of 1938. Yellowfin made up 84 percent of all the tuna packed. Striped tuna (skipjack) was the next largest contributing commodity. Following in order were tuna flakes; tuna, tonno style; albacore; and bonito. So far this year more than three-fourths of the pack has been produced in the San Pedro district.

Mackerel Pack in California Shows Decrease

Preliminary data compiled by the Division of Fish and Game of California show that the California pack of canned mackerel for the first two months of 1939 amounts to about 134,000 standard cases of one-pound cans, as compared with 178,000 standard cases for the same period of 1938. The entire production through February 1939 was packed in the San Pedro district. Minor quantities were produced in both the Monterey and San Diego districts during the same period the preceding year.

California Sardine Pack Increases

The Division of Fish and Game of California in its preliminary monthly statement shows the pack of sardines in California for the 1938-39 season through February amounted to 2,365,000 cases of 48 one-pound cans as compared with 2,191,000 cases for the same period in the preceding year. The pack in the Monterey and Northern districts amounted to 1,287,000 cases, or an increase of 30 percent as compared with that for the preceding season. The pack for the present season through February in the San Pedro and San Diego districts amounted to 1,078,000 cases or a decrease of 10 percent as compared with the same period in the preceding season. The total production in the State during February 1939 amounted to 365,000 cases as compared with 399,000 cases during February 1938.

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Japanese Sardine Exports Decrease in 1938

According to information published by the Bureau of Foreign and Domestic Commerce, the Monthly Trade Returns of the Ministry of Finance of Japan shows that exports of sardines during 1938 amounted to 56,104,224 pounds, which is a decrease of 39 percent as compared with the record high of the preceding year. Shipments of tomato sardines showed the heaviest losses, decreasing 51 percent from the 1937 exports.

Data released by the Tinned Sardine Exporters' Association, varying somewhat from the official data, show exports of 996,505 cases during 1938, of which 728,145 cases consisted of tomato sardines. The latter source showed a decrease of 45 percent in the exports of sardines in tomato sauce as compared with the previous year.

As reported by the Tinned Sardine Exporters' Association, the principal countries of destination for Japanese canned sardines, in order according to volume, were as follows: Netherlands Indies, Philippine Islands, Burma, Great Britain, Nigeria, British Malaya, Belgium, Gold Coast, and Egypt.

Sardine Production in Chosen Declines in 1938

Although sardine fishing industry statistics for Chosen are not yet compiled, the best available sources of information indicate that the 1938 catch declined materially in comparison with that for 1937. The decline was stated to have been caused principally by the unusually early southern migration of the schools of sardines. However, the sardine fishing industry of Chosen, constituting about one-third of that of the whole Japanese Empire continued to be important by virtue of its position as one of the two major industries of the peninsula--the other being the rice industry--and by reason of its present importance as a source of glycerine and other products for use in war-time economy.

The 1938 output of tomato sardines, sardine oil, and fertilizer are said to have decreased materially as a result of the reduced catch, low prices for oil, shortage of cans for oil, and reduced demand by Chinese merchants in the South Sea Islands and in British and Dutch possessions. However, exports of sardine meal greatly increased, contrary to the general trend in Chosen in industries not related to the China Emergency.

The information given above was supplied by the American Consulate General at Keijo and published by the Bureau of Foreign and Domestic Commerce.

Portuguese Sardine Pack Less in 1938

Preliminary figures released by the Consular Office at Lisbon and published by the Bureau of Foreign and Domestic Commerce, reveal the sardine catch in Portugal for the first 8 months of 1938 to have been 63,468.7 metric tons, valued at $1,385,840. This compares favorably with the 1937 catch of 63,498.7 metric tons, valued at $1,637,160. However, in spite of the fact that the catch of sardines in the 2 most recent years are almost equal, sardines used for canning during the first 11 months of 1938 amounted to only 23,448 metric tons as compared with 40,461 tons in the full year of 1937.

FOREIGN TRADE IN FISHERY PRODUCTS INCREASES

Imports of edible fishery commodities into the United States during the first two months of 1939 amounted to 63,977,000 pounds, an increase of 9,266,000 pounds as compared with the same period last year. Imported items showing marked increases during the current year were salted groundfish which totaled 9,796,000 pounds as compared with 4,708,000 pounds during the same period in 1938; canned tuna, 1,213,000 pounds as compared with 486,000 pounds last year; and canned crab meat, 1,948,000 pounds as compared with 717,000 pounds during January and February of 1938.

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Exports of edible fishery commodities which consist largely of two items--canned salmon and sardines--also increased during the first two months of the year. Total exports during this period amounted to 24,558,000 pounds, an increase of 4,852,000 pounds as compared with the same period last year. Canned salmon and sardines accounted for 78 percent of these imports. Shipments of canned salmon amounted to 8,029,000 pounds as compared with 4,753,000 pounds the previous year, while those of canned sardines amounted to 11,023,000 pounds as compared with 9,510,000 pounds during the first two months of 1938.

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FISHERY TRADE INDICATORS
(Expressed in Thousands of Pounds)

Item	Month	Latest month	Same month a year ago	Previous month
FRESH FISH LANDINGS				
Boston, Mass.	February	22,375	23,816	19,679
Gloucester, Mass.	do	1,815	686	1,783
Portland, Me.	do	612	542	726
Boston, Gloucester, and Portland:				
Cod	do	5,563	5,774	3,573
Haddock	do	10,248	12,085	8,727
Pollock	do	1,334	1,420	2,028
Rosefish	do	5,269	2,472	4,750
FISH RECEIPTS, CHICAGO 1/				
Salt-water fish	do	753	(2)	830
Fresh-water fish	do	1,405	(2)	2,404
Shellfish, etc.	do	396	(2)	480
By truck	do	591	(2)	790
By express	do	593	(2)	649
By freight	do	1,570	(2)	2,275
COLD-STORAGE HOLDINGS 3/				
New York, N. Y.:				
Salt-water fish	March	2,325	3,437	3,547
Fresh-water fish	do	1,786	1,571	2,097
Shellfish, etc.	do	966	1,604	1,698
Boston, Mass.:				
Salt-water fish	do	4,193	(2)	8,273
Fresh-water fish	do	10	(2)	32
Shellfish, etc.	do	379	(2)	663
Chicago, Ill.:				
Salt-water fish	do	1,315	(2)	1,474
Fresh-water fish	do	2,886	(2)	2,522
Shellfish, etc.	do	456	(2)	846
Unclassified	do	278	(2)	437
United States:				
Haddock fillets	do	1,567	3,008	3,027
Halibut	do	1,791	2,589	4,742
Mackerel	do	1,899	1,640	3,357
Pollock fillets	do	1,367	2,390	2,890
Rosefish fillets	do	578	2,549	1,086
Salmon	do	4,838	4,973	7,946
Whitefish	do	1,874	1,635	1,844
Whiting	do	3,751	2,281	5,846
Shrimp	do	4,108	(2)	5,324
New England, all species	do	8,341	13,334	15,733
Middle Atlantic, all species	do	9,535	10,799	12,903
South Atlantic, all species	do	1,737	1,654	2,596
North Central East, all species	do	8,119	7,089	10,441
North Central West, all species	do	2,954	3,623	4,259
South Central, all species	do	1,287	576	1,860
Pacific, all species	do	8,429	8,617	14,318
FOREIGN FISHERY TRADE 4/				
Exports:				
All edible fishery commodities	February	12,491	8,565	12,066
Canned salmon	do	3,416	2,375	4,612
Canned sardines	do	6,085	3,773	4,938
Imports:				
All edible fishery commodities	do	26,983	23,515	36,994
Fresh-water fish and eels, fresh or frozen	do	5,488	5,271	7,357
Canned tuna	do	517	206	595
Canned sardines	do	2,453	1,599	2,151
Cod, haddock, hake, etc., pickled or salted	do	4,802	2,020	4,994
Herring, pickled or salted	do	1,899	3,258	7,426
Crab meat, sauce, and paste	do	970	297	978
Lobsters, not canned	do	691	772	1,220
Lobsters, canned	do	45	21	52

1/ Consists of direct receipts of dealers, brokers, and smokers.
2/ Data not available.
3/ Data for individual cities are as of the last Thursday of the month, except those at Boston which are for the last Wednesday of the month, and those for geographical areas and the total of the United States which are as of the 15th of the month.
4/ From data compiled by the Bureau of Foreign and Domestic Commerce.

Note.-Data for the latest month are subject to revision.

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PACIFIC SALMON OILS

Investigational Report No. 40

The Pacific salmon industry of the United States and Alaska provides a source of raw material capable of yielding approximately 1,500,000 gallons of salmon oil annually from waste material. To date production has seldom exceeded 200,000 gallons. Taking cognizance of this wide divergence between the potential and actual production, the Bureau of Fisheries recently conducted a study of salmon oils. The results of this study are included in Fisheries Investigational Report No. 40, entitled "Pacific Salmon Oils", by Roger W. Harrison, Andrew W. Anderson, S. R. Pottinger, and Charles F. Lee. The report brought out the following facts, among others:

1. Between 80 and 90 percent of the catch of salmon is canned. Thus, most of the waste material consisting of heads, tail portions, fins, and visceral organs are accumulated in connection with cannery operations.

2. The waste material of chinook salmon represents about 30 percent of the round weight of the fish; Alaska red, coho, and chum salmon, each about 33 percent; and pink salmon, about 35 percent.

3. The waste material of chinook salmon will yield between 30 and 40 gallons of oil per ton; Alaska red and coho salmon waste, from 25 to 35 gallons; pink salmon waste, from 15 to 25 gallons; and chum salmon waste, from 10 to 15 gallons.

During the course of this investigation, a large number of oil samples have been prepared and studied in the laboratory to determine their chemical, physical, and biological properties. Since information of this type is indicative of the utility of an oil to the consumer, the data have been assembled to further acquaint industry with the nature of salmon oils. The data should be of interest in evaluating certain problems of production and distribution and suggest possibilities for the wider use of salmon oils.

Also, knowledge of the characteristics of the oils from the various species of salmon may prove of interest in other problems of the salmon industry not directly related to the utilization of the waste material.

The report includes information on the source of salmon oils; their properties; their proximate composition; and relation between iodine number, refractive index, and specific gravity.

The report may be obtained from the Superintendent of Documents, Government Printing Office, Washington, D. C., for 5 cents.

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